

USGS-NPS Vegetation Mapping Program
Wupatki National Monument

Ephedra torreyana – (*Atriplex canescens*, *confertifolia*) Sparse Vegetation

MAP CLASS	Moenkopi Shale Sparse Vegetation
COMMON NAME	Torrey's Joint-fir – (Fourwing Saltbush, Shadscale) Sparse Vegetation
PHYSIOGNOMIC CLASS	Sparse Vegetation (VII)
PHYSIOGNOMIC SUBCLASS	Unconsolidated material sparse vegetation (VII.C)
PHYSIOGNOMIC GROUP	Sparsely vegetated soil slopes (VII.C.3)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (VII.C.3.N)
FORMATION	Dry slopes (VII.C.3.N.b)
ALLIANCE	<i>Ephedra torreyana</i> Sparsely Vegetated Alliance

CLASSIFICATION CONFIDENCE LEVEL Weak

USFS WETLAND SYSTEM Upland

RANGE

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Torrey's Joint-fir – (Fourwing Saltbush, Shadscale) Sparse Vegetation is one of the most common associations on the sparse badlands. Our six relevés sampled were located in the eastern section of the project boundary in Wupatki NM, Babbitt Ranches, and Navajo Nation lands.

ENVIRONMENTAL DESCRIPTION

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This association's elevation ranged from 4,298-4,524 ft (1,310-1,379 m) (average 4,380 ft/1,335 m). The topography ranged from level areas to hills with slopes ranging from 0-45% (average 9%). It is located within sparse badland habitats with substrate including clay soils, riverine cobbles, basaltic cobbles, and sandstone bluffs.

MOST ABUNDANT SPECIES

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Stratum

Shrub

Species

Ephedra torreyana, *Atriplex canescens*, *Atriplex confertifolia*

ASSOCIATED SPECIES

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Achnatherum hymenoides, *Artemisia filifolia*, *Bouteloua eriopoda*, *Dasyochloa pulchella*, *Ephedra viridis*, *Eriogonum corymbosum*, *Ericameria nauseosa*, *Fallugia paradoxa*, *Gutierrezia sarothrae*, *Muhlenbergia porteri*, *Pleuraphis jamesii*, *Psoralea thompsoniae*, *Salsola tragus*, *Sphaeralcea* sp., *Sporobolus airoides*, *Stanleya pinnata*, *Tiquilia latior*, *Yucca angustissima*

VEGETATION DESCRIPTION

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Torrey's Joint-fir – (Fourwing Saltbush, Shadscale) Sparse Vegetation total vegetation cover was 6-17% (average 10%) with 4-12% (average 8%) in the shrub layer and 0.5-7% (average 3%) in the herbaceous layer. The total species diversity was low and ranged from 4-16 species (average 10) within the 6 relevés sampled.

Ephedra torreyana is an indicator for this association and must be present for the association definition. It was found with 0.5-7% absolute cover (average 4%). *Atriplex canescens* or *Atriplex confertifolia* may be dominant in this association, if *Ephedra torreyana* has low cover, but either do not have to be present. *Atriplex canescens* ranged from 0-5% absolute cover (average 1%) and *Atriplex confertifolia* ranged from 0-5% absolute cover (average 1%). The herbaceous layer was not dominated a single species.

CONSERVATION RANK G?

DATABASE CODE Cegl005801

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MAP CLASSES

The association Torrey's Joint-fir – (Fourwing Saltbush, Shadscale) Sparse Vegetation is represented by map class Moenkopi Shale Sparse Vegetation (map code 6).

The total area mapped within Wupatki NM is 5,014 ac (2,029 ha) within 274 polygons and the total area in the park environs is 6,415 ac (2,596 ha) within 125 polygons.

The map class Moenkopi Shale Sparse Vegetation was used to map all sparsely vegetated Moenkopi shale badland associations. *Ephedra torreyana* was used as an indicator for this map class, however it does not have to be dominant in the sparsely vegetated badland habitats to be mapped within this map class.